

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listing of the claims in this application.

Listing of Claims

1. (currently amended) A coated semiconductor device having a plurality of electrodes embedded therein and exposed to an upper surface, and a coating layer coating the upper surface of the semiconductor device, wherein the coating layer is from about 0.5 to about 100 microns thick and is composed of a mixture of controlled porosity glass (CPG) particles having an average particle size of from about 0.25 to about 25 microns, and a thickening agent, wherein the coating layer adheres to the upper surface of the semiconductor device, wherein the thickening agent is selected from the group consisting of solid polymers of olefins, polyethylene, polyvinyl difluoride, polypropylene and polybutylene; vinyl resins, polytetrafluoroethylene (PTFE), polyvinylchloride, polyacrylates, polyvinylacetate and polymethylmethacrylate; polycarbonates and polysulfones.

2. (original) The coated semiconductor device of claim 1 wherein the thickness of the coating layer is from about 1 to about 25 microns.

3. (original) The coated semiconductor device of claim 2 wherein the thickness of the coating layer is from about 3 to about 15 microns.

4. (currently amended) The coated semiconductor device of claim 1 wherein the thickening agent further comprises ~~is selected from the group consisting of solid polymers of olefins, polyethylene, polyvinyl difluoride, polypropylene and polybutylene; vinyl resins, polytetrafluoroethylene (PTFE), polyvinylchloride, polyacrylates, polyvinylacetate and polymethylmethacrylate; polycarbonates and polysulfones, optionally in combination with an~~ acid selected from the group consisting of HCl, HBr, HI, HNO₃, H₃PO₄, HC₁₀₄, acetic acid, sulfuric acid, organic acids, acetic acid, citric acid, malic acid, acids with the structure R – COOH, R – SO₃H, and R – PO₃H₂, nitric acid, phosphoric acid, and combinations thereof.

5. (original) The coated semiconductor device of claim 4 wherein the thickening agent is a resin.

6. (original) The coated semiconductor device of claim 5 wherein the thickening agent is PTFE in particle form or in aqueous suspension.

7. (original) The coated semiconductor device of claim 6 wherein the PTFE particles are from about 0.005 to about 1.0 microns.

8. (original) The coated semiconductor device of claim 1 wherein the semiconductor device is made from silicon nitride and the electrodes are made from platinum.

9. (currently amended) A formulation for coating and adhering to a semiconductor device, wherein the semiconductor device comprises a plurality of electrodes, comprising a mixture of controlled porosity glass (CPG) particles having an average particle size of from about 0.25 to about 25 microns, and a thickening agent, wherein the thickening agent is selected from the group consisting of solid polymers of olefins, polyethylene, polyvinyl difluoride, polypropylene and polybutylene; vinyl resins, polytetrafluoroethylene (PTFE), polyvinylchloride, polyacrylates, polyvinylacetate and polymethylmethacrylate; polycarbonates and polysulfones.

10. (previously presented) The formulation for coating and adhering to a semiconductor device of claim 9, wherein the thickness of the coating layer is from about 1 to about 25 microns.

11. (previously presented) The formulation for coating and adhering to a semiconductor device of claim 10, wherein the thickness of the coating layer is from about 3 to about 15 microns.

12. (currently amended) The formulation for coating and adhering to a semiconductor device of claim 9, wherein the thickening agent further comprises ~~is selected from the group consisting of solid polymer of olefins, polyethylene, polypropylene and polybutylene; polyvinyl difluoride, vinyl resins, polyacrylates, polytetrafluoroethylene (PTFE), polyvinylchloride, polyvinylacetate and polymethylmethacrylate; polycarbonates and polysulfones, optionally in combination with an acid selected from the group consisting of HCl,~~

HBr, HI, HNO₃, H₃PO₄, HClO₄, acetic acid, sulfuric acid, organic acids, acetic acid, citric acid, malic acid, acids with the structure R – COOH, R – SO₃H, and R – PO₃H₂, nitric acid, phosphoric acid, and combinations thereof.

13. (previously presented) The formulation for coating and adhering to a semiconductor device of claim 9, wherein the thickening agent is a resin.

14. (previously presented) The formulation for coating and adhering to a semiconductor device of claim 9, wherein the thickening agent is PTFE in particle form or in aqueous suspension.

15. (previously presented) The formulation for coating and adhering to a semiconductor device of claim 9, wherein the PTFE particles are from about 0.005 to about 1.0 microns.